AMSAT News Service Weekly Bulletins
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AMSAT NEWS SERVICE
ANS-253

ANS is a free, weekly, news and information service of AMSAT North America, The Radio Amateur Satellite Corporation. ANS reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

Please send any amateur satellite news or reports to:
ans-editor at amsat.org

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* Reminder: Ballots for the AMSAT-NA Board of Directors Election *
* are due by mail by the close of business on Sepetember 15, 2012 *
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SB SAT @ AMSAT $ANS-253.01
ANS-253 AMSAT News Service Weekly Bulletins

AMSAT News Service Bulletin 253.01
>From AMSAT HQ SILVER SPRING, MD.
September 9, 2012
To All RADIO AMATEURS
BID: $ANS-253.01

AMSAT President Barry Baines, WD4ASW TV Interview on HAMRADIONOW.tv

Gary Pearce, KN4AQ, producer and host of the HAMRADIONOW.tv webcasts interviewed AMSAT President Barry Baines, WD4ASW at the Shelby North Carolina Hamfest. Barry's interview provides an in-depth update on AMSAT activities and plans.

As Gary says, "So there's a lot going on at AMSAT. Exciting stuff like commanding a remote-control vehicle with instructions relayed through the ISS (think Mars Curiosity Rover)". As Barry said, "This isn't your grandfather's AMSAT anymore".

Barry discussed AMSAT's exciting projects including:

+ Project Fox Cubesat development
+ AMSAT selection for NASA's ELaNa launch program
+ AMSAT development of missions meeting STEM educational goals
+ AMSAT-ARRL-ARISS teamwork
+ Future opportunities in space
+ How you can join and help

Watch the 60 minute interview at HAMRADIONOW.tv, Episode 19:
http://arvideonews.com/hrn/HRN_Episode_0019.html

While you are on the Amateur Radio Video News website please "click the pig" if you can donate to this amateur radio video series.

[ANS thanks Gary Pearce, KN4AQ and Amateur Radio Video News for the above information]

Board of Directors Ballots Due by September 15

If your ballot for the 2012 AMSAT Board of Directors election has not hit the mail yet you gotta do it today!

AMSAT Corporate Secretary Alan Biddle, WA4SCA reminds all AMSAT-NA members, "Your ballots for the 2012 Board of Directors election need to be received at AMSAT-NA headquarters by September 15th, 2012. This is one of your best opportunities to make your views on the path of our organization known."

Ballots for the 2012 AMSAT-NA Board of Directors election have been mailed to all members. Also included is biographical information about each of the candidates.

Select no more than three of the six listed candidates (in alphabetical order):

+ Tom Clark, K3IO
+ Steve Coy, K8UD
+ Mark Hammond, N8MH
+ Lou McFadin, W5DID
+ Gould Smith, WA4SXM
+ Patrick E. Stoddard, WD9EWK

The 3 candidates receiving the most votes will become directors serving 2 year terms. The 2 receiving the next highest number of votes will be seated as alternates for 1 year terms.

You must mail your ballot back to be received at the AMSAT-NA Office no later than the close of business on September 15, 2012:

   AMSAT
   850 Sligo Avenue, #600
   Silver Spring, MD 20910

[ANS thanks AMSAT Corporate Secretary Alan Biddle, WA4SCA for the above information]

Register On-line for the AMSAT 2012 Space Symposium

AMSAT announces that the registration for the 2012 AMSAT Space Symposium, to be held on Friday, October 26th through Sunday, October 28th is now open on-line. A mail-in option is also available those preferring this approach.

See the AMSAT Web Store to complete your on-line registration:
http://store.amsat.org/catalog/index.php?cPath'

Downloadable paper registration forms in MS-Word format and PDF format are available on the 2012 Symposium page:
http://www.amsat.org/amsat-new/symposium/2012/index.php

Prices for the Symposium are:
+ Symposium Registration including Proceedings
  o Through September 23, 2012: $ 45.00
  o Starting September 24, 2012: $ 50.00
  o At the Door: $ 55.00

+ Saturday Evening Banquet $ 45.00

+ Sunday Morning Area Coordinators' Breakfast $ 15.00

+ Monday (Oct 29) bus trip to KSC and entrance ticket $ 100.00

The Symposium weekend will feature:

+ Space Symposium with Amateur Satellite Presentations
+ Operating Techniques, News, & Plans from the Amateur Satellite World
+ Board of Directors Meeting open to AMSAT members
+ Meet Board Members and Officers
+ Annual General Membership Meeting
+ Annual Banquet-Keynote Speaker and Door Prizes

The Symposium Hotel is the Holiday Inn at Orlando-International Airport is located one mile from the Orlando International Airport (MCO). The AMSAT discount rate is $99 + taxes per night. The reservation block code used when calling the hotel directly is AMT.

The hotel telephone number is 407-851-6400. The Symposium Committee recommends you make reservations by calling the hotel directly rather than through the Web. Cutoff date for reservations is Oct 6, 2012. The direct link to the hotel web page is:
http://www.holidayinn.com/hotels/us/en/orlando/mcoap/hoteldetail

The hotel offers free Internet connection and free airport shuttle. When you arrive at the Orlando Airport call 407-709-5310 to request the shuttle.

The Orlando International Airport (MCO) is the closest to the Symposium and is served by most major air carriers. The hotel address is: 5750 T.G. Lee Blvd ' Orlando, FL 32822. A map link is included on the hotel web page.

[ANS thanks the 2012 Symposium Committee for the above information]

Final Call - AMSAT 2012 Space Symposium Papers Due October 1

Symposium Proceedings Editor, Dan Schultz, N8FGV reminds authors

the final copy of your paper for the 2012 Space Symposium is due by October 1, 2012. Dan requests a tentative title of your presentation as soon as possible, with final copy to be by October 1 for inclusion in the printed proceedings. Abstracts and papers should be sent to Dan Schultz, N8FGV, at n8fgv at amsat.org

Proposals for papers, symposium presentations and poster presentations are invited on any topic of interest to the amateur satellite community:

+ Papers for publication in the Proceedings

+ Symposium Presentations

+ Poster Presentations

+ Equipment and Operating Demonstrations

The Symposium Committee still has prime slots available on the speaker's schedule. The AMSAT Symposium depends on YOU to make it happen, without speakers there is no Symposium.

Please consider doing a presentation, even if you have never done so in the past. We are especially interested in papers and presentations involving our educational partnerships with K-12 and university level classrooms. Education is quickly becoming critical for our future rides to space.

[ANS thanks 2012 Symposium Proceedings Editor Dan Schultz, N8FGV for the above information]

Israeli Students Developing Duchifat-1 145.825 MHz APRS CubeSat

The SpaceDuchifat-1 is an experimental and educational CubeSat developed and built by young Israeli students at the Space Laboratory of the Herzliya Science Centre (HSC). The project is directed by Dr. Ana Heller with support from the Herzliya city municipality and the Israeli Amateur Radio Club.

The CubeSat will carry an APRS digipeater operating on 145.825 MHz and a UHF/VHF 1200 bps BPSK transceiver that can provide a CW beacon and an FM to DSB transponder.

The main mission of the satellite is to transmit real-time information via radio amateur packets from a Low Earth Orbit (LEO) using the Automatic Position Reporting System (APRS) protocol. Duchifat-1 will allow remote travelers to access the satellite for worldwide position/status reporting and messaging even in the case of using simple handheld or mobile radios with Omni-directional whip antennas.

Due to the lack of APRS digipeating coverage on the 145.825 MHz frequency remote travelers, ships at sea, and stations in many parts of the world are presently unable to use the APRS system. The Duchifat-1 satellite will augment the existing worldwide terrestrial Amateur Radio APRS by adding LEO satellite coverage along with the International Space Station APRS digipeater.

Real-time position reporting uses the Global Positioning System (GPS) of the groundstation and will allow transmission of a wide variety of data including short text messages and telemetry data. The reports

will be combined with a computer and mapping software to display the data superimposed on maps at a HSC Ground Station.

No launch or orbit details are presently available.

Further information at http://www.madaim.org.il/hsl/php/index-en.php

[ANS thanks HSL Space Laboratory at the Herzliya Science Center in Israel for the above information]

Astronaut EVA Activity Delays ISS CubeSat Deployment Schedule

A critical EVA was conducted at the International Space Station on Wednesday, September 5 by Astronauts Sunita Williams (KD5PLB) and Akihiko Hoshide (KE5DNI) to complete the installation of a spare power unit on the station's truss, which caused problems during an August 30 spacewalk.

During the August 30 EVA Williams and Hoside spent 8 hours and 17 minutes in space, but failed to install a new Main Bus Switching Unit (MBSU) on the station's s-zero truss as they had difficulties driving the bolts to secure the equipment. The MBSU is a heavy component that is used to relay power from the station's solar arrays to its systems.

This additional EVA activity drove schedule changes in which JAXA announced that the deployment of five CubeSats from the ISS planned for September 10 has been postponed. A new deployment date has not yet been announced.

Four of the CubeSats carry Amateur Radio payloads, they are F-1, FITSAT-1, WE-WISH and TechEdSat. Please refer to ANS-197 for the detailed list of CubeSat radio frequencies and operating modes: http://amsat.org/pipermail/ans/2012/000634.html

The CubeSats are mounted in a JEM-Small Satellite Orbital Deployer (J-SSOD). In one pod are FITSAT-1, TechEdSat and F-1 and in the second pod is WeWish and a scientific 2U CubeSat RAIKO. Japanese astronaut Akihiko Hoshide KE5DNI will use the ISS Kibo robot arm to deploy the pods as demonstrated in this YouTube video: http://www.youtube.com/watch?feature�ayer_embedded&v�uewuyv0wM

ELaNa Cubesats to Launch From Vandenberg September 13 - Thursday!

The Atlas V NROL-36 launch from Vandenberg Air Force Base in California, originally planned for August is now ready for launch on September 13. Liftoff is planned during a period between 1:45 and 4:15 p.m. local PDT (4:45-7:15 p.m. EDT; 2045-2315 GMT).

This launch will be carrying a pair of ocean surveillance satellites to locate ships at sea. Also aboard this flight at four cubesats as part of ELaNa IV mission and seven cubesats for government missions.

The ELaNa Cubesats aboard are:
+ CINEMA (Cubesat for Ion, Neutral, Electron, Magnetic fields)
   o Downlinks for engineering telemetry and command are in the

2400-2450 MHz range; Science telemetry is in 2200-2300 MHz range.

+ CSSWE (Colorado Student Space Weather Experiment)
  o Downlink 437.345 MHz, 9k6 with AX25

+ CP5 (PolySat)
  o Downlink 437.405 MHz at 1 watt, AFSK on LSB AX.25 over NRZI at 1200 baud, every 2 minutes, begins 3.5 hours after first turn-on.

+ CXBN (Cosmic X-Ray Background Nanosatellite)
  o Downlink 437.525 MHz, GFSK, AX.25

The US Government Satellites aboard are:
+ Aeneas
  o First cubesat to deploy 2.4 GHz Dish Antenna. WIFI transmitter will transmit on 2425.0 MHz with 1 watt of output power.
  o Downlink 437.600 MHz AX25 1200 bps beacon every 10 seconds and spread spectrum two-way link elsewhere in the 70cm band.
  o Will test a 20-inch mesh antenna to track electronic tags on shipping containers in the open ocean.
+ ORSES (ORS Enabler Satellite)
+ Horus
+ Re
  o Will be used for the optical tracking of space debris
+ Aerocube 4A, 4B, 4C
  o Testing deployable solar panels.
  o Technology demonstration of "parachute-like" devices to deorbit satellites.
  o Testing closed-loop attitude control system based around a three-axis gyroscope.

A discussion of the launch re-scheduling can be found on-line at:
http://www.nasaspaceflight.com/2012/08/uatlas-v-launch-nrol-36-vandenberg/

Please refer to the prior bulletin for mission summaries and satellite team web pages: http://amsat.org/pipermail/ans/2012/000637.html

A detailed article of the launch can be found on-line at:
http://www.americaspace.org/?p#568

[ANS thanks NASA, the CubeSat Teams noted above, AMSAT-UK, Gunter's Space Page and nasaspaceflightnow.com for the above information]

AMSAT Store Grand Reopening

The AMSAT Store is fully open for business after being updated. All the usual AMSAT software, hardware, and clothing are available, as is the registration for the AMSAT 2012 Symposium and activities:
http://store.amsat.org/catalog/index.php?cPath'

Please stop by, even if you are just looking:
http://store.amsat.org/catalog/

You can also find a link to the AMSAT Store from the main web page at: http://www.amsat.org. It is the bottom button on the list on the left side of the main page.

If you don't find what you are looking for here, contact Martha at

the main office:

+ E-mail at martha@amsat.org
+ From the US call toll free at (888) 322-6728
+ From all other locations call (301) 589-6062
+ Fax (301) 608-3410
+ Regular mail: AMSAT, 850 Sligo Ave. Suite 600, Silver Spring, MD 20910

[ANS thanks Alan Biddle, WA4SCA for tha above information]

Successful ARISS Contacts With Germany, Japan, and Maryland

Astronaut Akihiko Hoshide, KE5DNI participated in two ARISS (Amateur Radio on the International Space Station) contacts over the past week. He spoke with students attending Megina Gymnasium Mayen in Mayen, Germany on Friday, August 31 and with youth from the Iruma Junior Ham Club in Iruma, Japan on Sunday, September 2.

Sunita Williams, KD5PLB picked up a third ARISS contact with the National Electronics Museum in Linthicum, Maryland on Saturday, September 1. The radio contacts were integrated into comprehensive science and math lessons.

[ANS thanks Carol Jackson, KB3LKI, for the above information]

September 9 Launch From India Planned for Japan PROITERES Satellite

The Japanese amateur radio satellite PROITERES is planned to launch Sunday, September 9 at 0421 UT from the Indian Space Research Organisation (ISRO) Satish Dhawan space centre. The satellites SPOT6 and mRESINS will be on the same launch into a 695 km x 695 km, 98.2° inclination orbit.

PROITERES was built by a team of students and faculty members of Osaka Institute of Technology (OIT) and the spacecraft aims to demonstrate powered flight using a Pulsed Plasma Thruster (PPT) engine. Its amateur radio callsign is JL3YZK.

PROITERES stands for PRoject of OIT Electric-Rocket-Engine Onboard Small Space Ship and will transmit on 437.485 MHz FM/AFSK. The spacecraft carries a camera and the two CPU's run the Linux operating system.

PROITERES, Osaka Institute of Technology, Japan
Launch : 9 Sep 2012 4:21UTC (9:51IST)
Vehicle: PSLV-CA with SPOT6 and mRESINS
Site : Satish Dhawan Space Centre, Sriharikota, India
30cm^3, 10kg, 10W, 437.485MHz FM/AFSK

The PROITERES Google English website contains the most up-to-date information see http://tinyurl.com/PROITERES-Satellite

There is also an English language website at http://www.oit.ac.jp/elc/~satellit/ImageProiteres.html

A video showing ISRO launch prepartion for PROITERES can be found at:
http://www.uk.amsat.org/10201

[ANS thanks Mineo Wakita, JE9PEL and AMSAT-UK for the above
information]

Help Wanted: AMSAT News Service Rotating Editor Positions Available

The AMSAT News Service (ANS) is responsible for researching, writing, editing, and publishing the weekly amateur satellite news bulletins.

After the passing of Dee, NB2F, we currently have a two editors who take a turn weekly to publish the bulletins. With the addition of a volunteer, or two, this would generally involve taking a turn about every 3 to 4 weeks.

At present we a looking for interested satellite enthusiasts to join the ANS editorial team. Professional writing/editing experience is NOT a requirement. Your interest and enthusiasm in following and reporting on amateur radio in space will get you started! The ANS Editor team helps each other by rounding up items of interest. Plus we receive submitted items for publication ... so you won't be left all alone!

If you can commit to working on the bulletins for a week on a rotating basis please reply via e-mail to AMSAT News Service Editor JoAnne Maenpaa, K9JKM via k9jkm at amsat.org.

[ANS thanks AMSAT Vice-President User Services, Gould Smith, WA4SXM
for the above information]

Satellite Shorts From All Over

+ Listen for Tom Deeble, KA6SIP operating on FO-29, SO-50, and AO-27 satellites from the north shore of Kauai in the Hawaiian Islands. Tom is running a dual FT-817 setup with an Arrow antenna and ARR 440 preamp. Since this is a family trip he will try to operate on satellites in his spare time. He will be on Kauai until Friday, September 14.

+ Plan ahead! Scouting's Jamboree on the Air is coming up the weekend of October 20. If you know of local scout groups latch on to them and hopefully let's make the satellites come alive with Scout to Scout contacts. It may end up being the high point for many of the Scouts involved with JOTA. (Tom Schuessler, N5HYP)

+ Congratulations Bob Bruninga, WB4APR as the ARRL announced him as the winner of the August QST Cover Plaque award. Bob's article is "Rethinking Electrical Power for the Ham." The QST Cover Plaque award is given to the author or authors of the best article in each issue of QST Magazine and is determined by a vote of ARRL members. (ARRL)

+ Enjoy a simulated flyover of the most intriguing landmarks on giant asteroid Vesta, as seen by NASA's Dawn spacecraft: http://www.youtube.com/watch?feature=player_embedded&v=vz6J8cnc8

+ Congratulations to Hector, CO6CBF on his successful amateur radio and satellite demonstration in the town's central park at Aguada de Pasajeros, Cuba. Hector reports 21 stations were worked on 3 satellite passes. He was also able to demonstrate receiving the contact between the ISS and K3CUJ at the National Electronics Museum inLinthicum, MD. His gear includes a mobile 2m FM radio with a homebrew 70cm/2m down converter for receive, a 2M Kenwood TK-270 HT for transmit. He operates with the HT in one hand and his home-brew Arrow Antenna with a homebrew preamplifier in the other hand.

+ Earth-Mars-Earth Radio Message Received by Curiosity Controllers Utilizing the radio relay capability of the Mars Science Laboratory Curiosity Rover on the surface of Mars, an international network of telecommunications relay orbiters around Mars and NASA's Deep Space Network (DSN) voice playback of NASA Administrator Charles Bolden's message to JPL's Mars mission crew was played for the team on August, 27, 2012. The video and audio of the relayed message are available at: http://www.nasa.gov/mission_pages/msl/news/bolden20120827.html

+ AMSAT Commemorative Shirt for the 2012 Symposium is only available by mail order. If you have not received a copy of the order form you can download and print a copy from the the link on the front page at: http://www.amsat.org. The deadline for receiving your mail order is September 21, 2012.

+ The next Hudson Valley Satcom net dates are Thursday, September 13, and September 27, 8 PM EDT (UTC-4 UTC) on the 146.97 MHz MBARC Repeater (PL 100). An echolink connection is available on the N2EYH-L node. More information at: http://www.hvsatcom.org. (Stu, WA2BSS)

+ YouTube Space Lab Live Broadcast of Space Experiments: NASA has partnered with Space Adventures and YouTube on a global competition that challenged 14-18 year old students to design a science experiment to be performed in space. The winning experiments were conducted aboard the International Space Station, or ISS, and the results will be revealed live on YouTube. Of the 2,000 experiment ideas received from students in over 80 countries, only two were chosen to fly to space. The live broadcast can be seen on September 13, 2012, at 10:30 a.m. EDT (UTC-4), at: http://www.youtube.com/spacelab.

+ NASA's Digital Learning Network, or DLN, is hosting a special event on September 17, 2012, at 1 p.m. EDT to commemorate the departure of space shuttle Endeavour. Watch the live webstream from NASA's Kennedy Space Center in Florida as space shuttle Endeavour continues her journey on the back of the Shuttle Carrier Aircraft, a modified 747, to its final destination at the California Science Center in the heart of Los Angeles. For more information and to watch the webcast online, visit the DLN web site at: http://dln.nasa.gov

[ANS thanks everyone for the above information]

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In addition to regular membership, AMSAT offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT Office.

Primary and secondary school students are eligible for membership at one-half the standard yearly rate. Post-secondary school students enrolled in at least half time status shall be eligible for the student rate for a maximum of 6 post-secondary years in this status. Contact Martha at the AMSAT Office for additional student membership information. And with that, please keep in mind if you give a man a fish, he will eat today ... Promise a man a million fish, he will contribute heap big wampum to your tribal election campaign fund.

73,
This week's ANS Editor,
JoAnne Maenpaa, K9JKM